

Figure 1

START

Replace all multi-output nodes

Determine candidate sub-network
for replacement

Identify set F of
logic functions realized by S

Are there alternative
implementations of F in
the database?

No

Yes

Compute costs of alternatives

Any alternative
acceptable?

No

Yes

Exchange

Stop criteria
reached?

No

Yes

END

Figure 2

10066264-013106



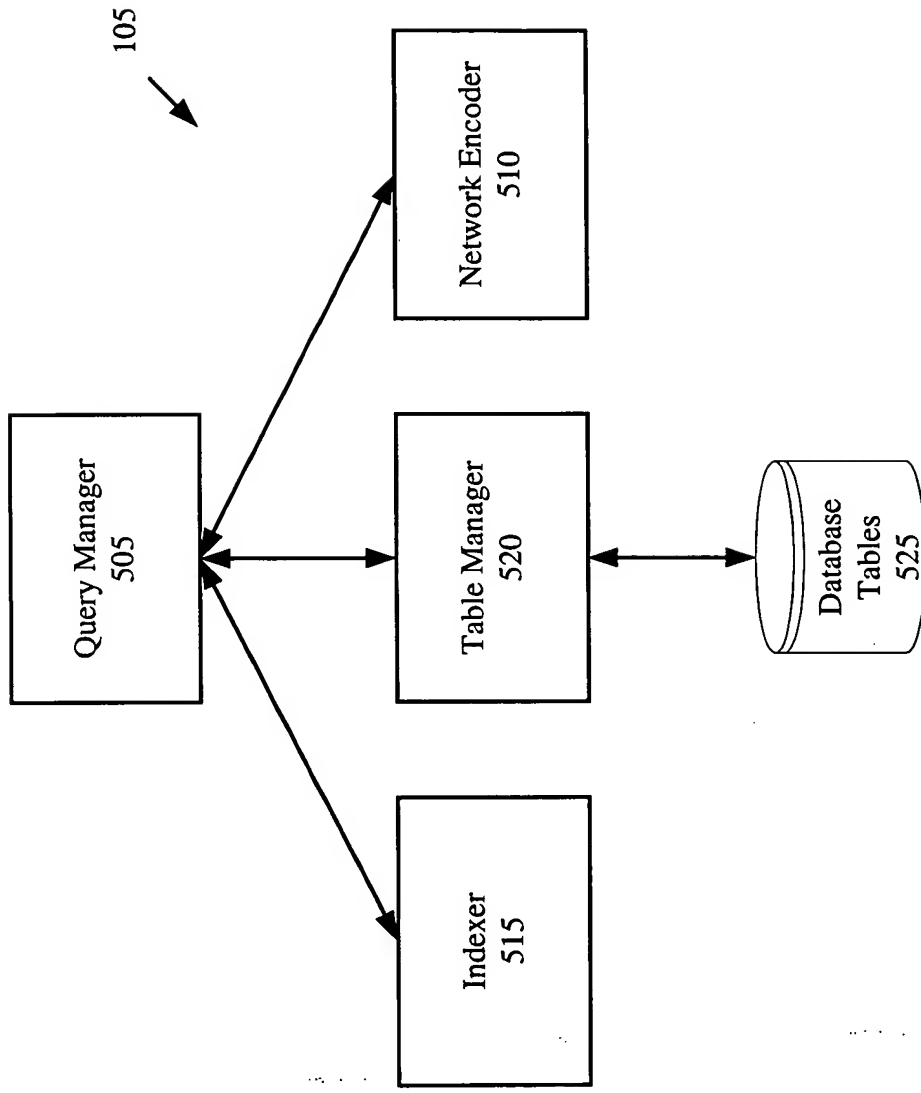


Figure 5

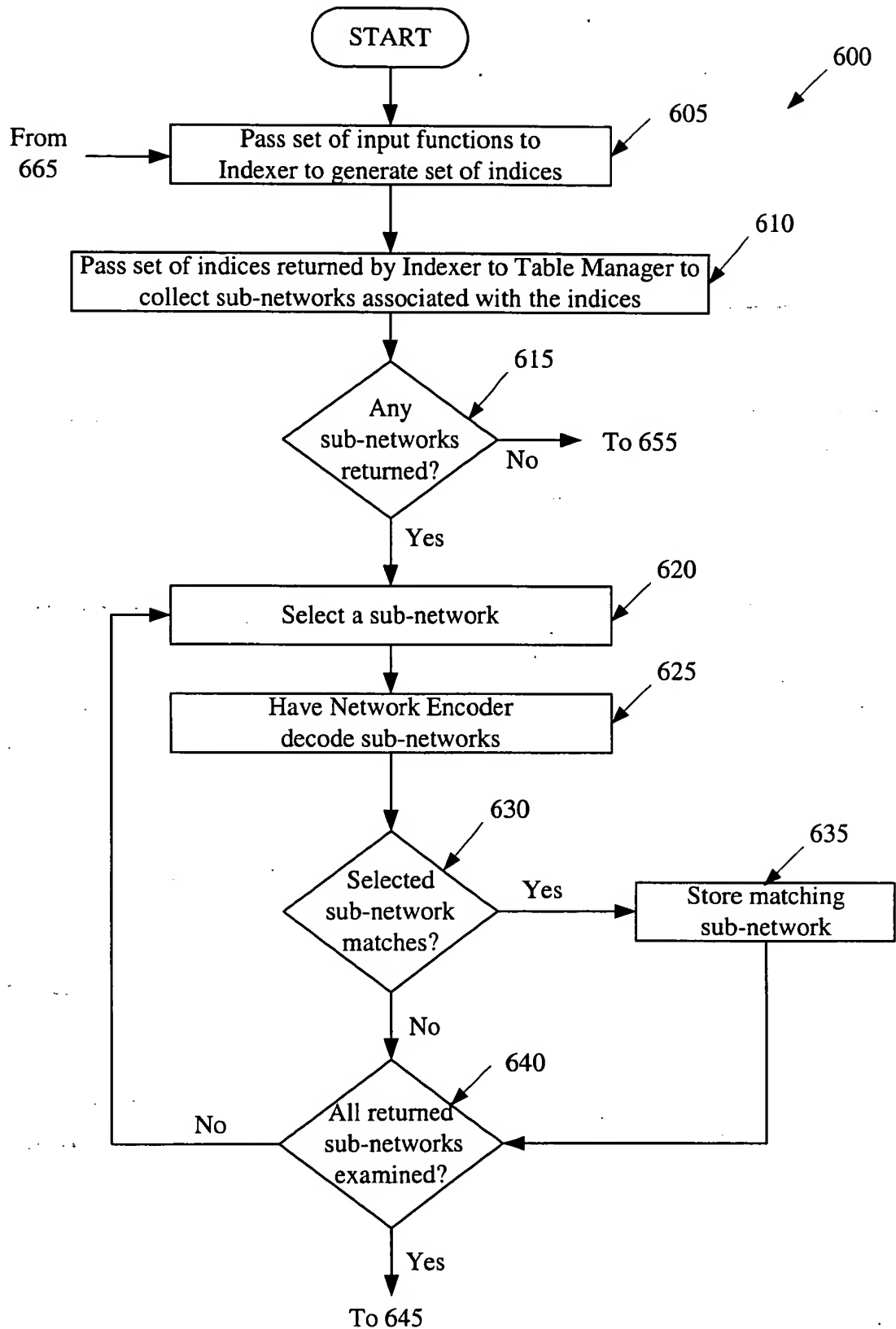


Figure 6A

Figure 6: Figure 6A
Figure 6B

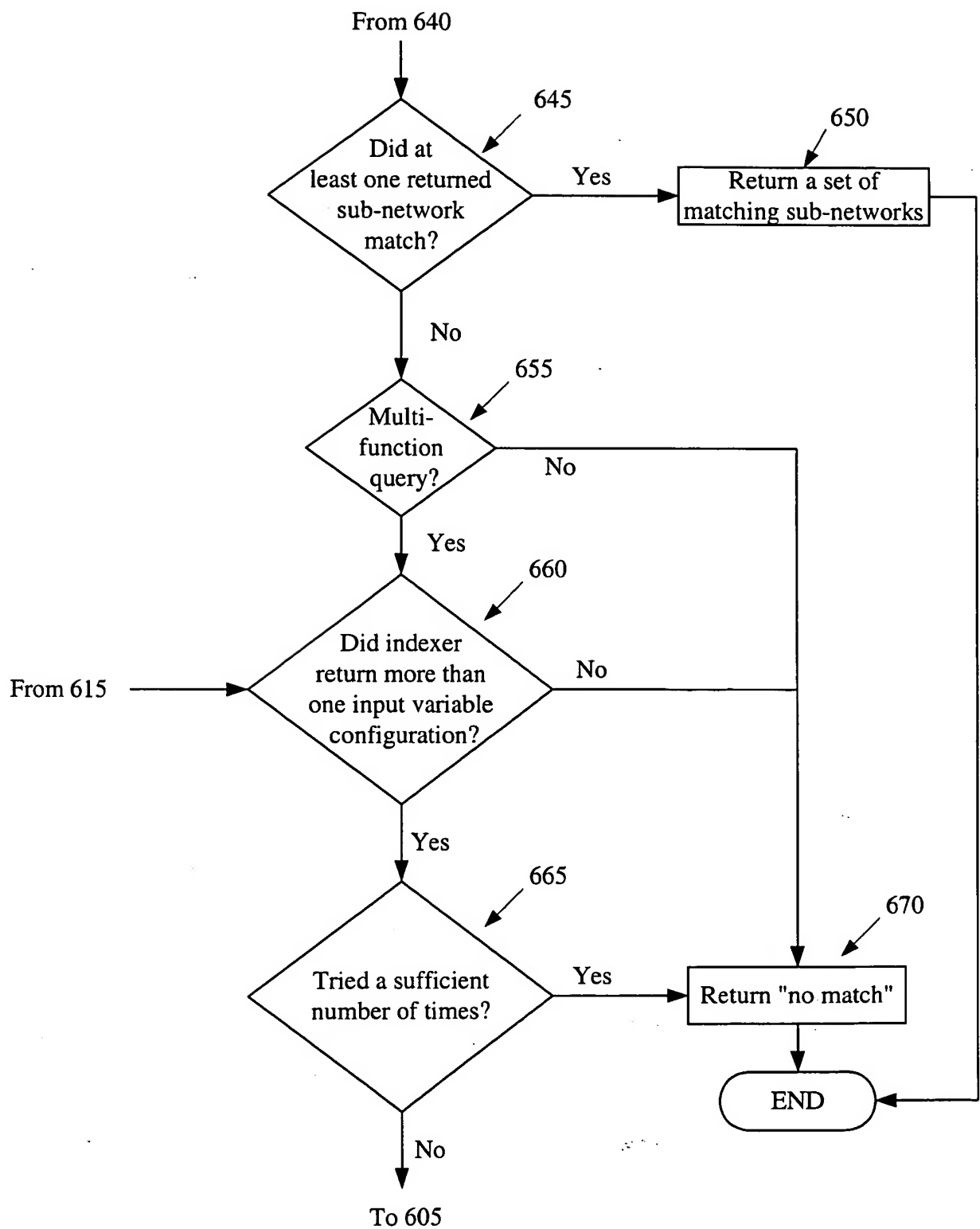


Figure 6B

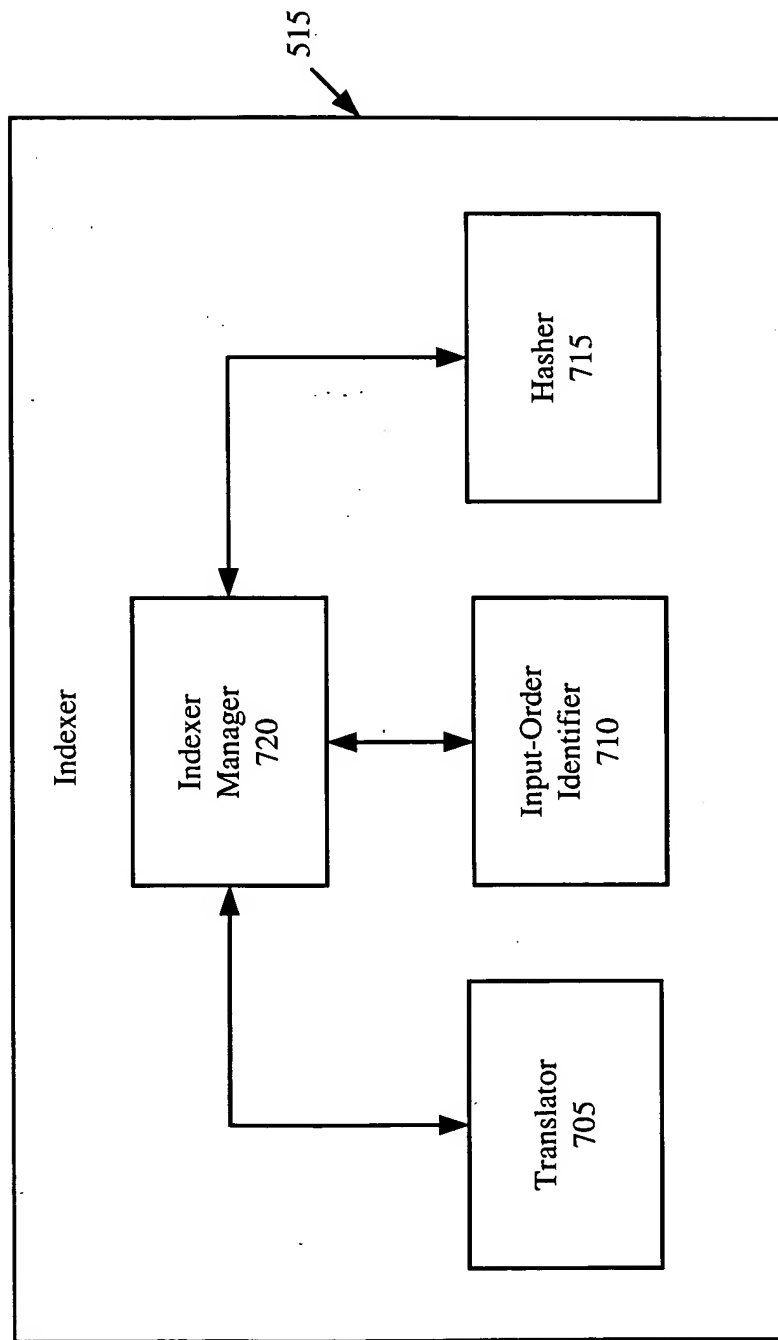


Figure 7

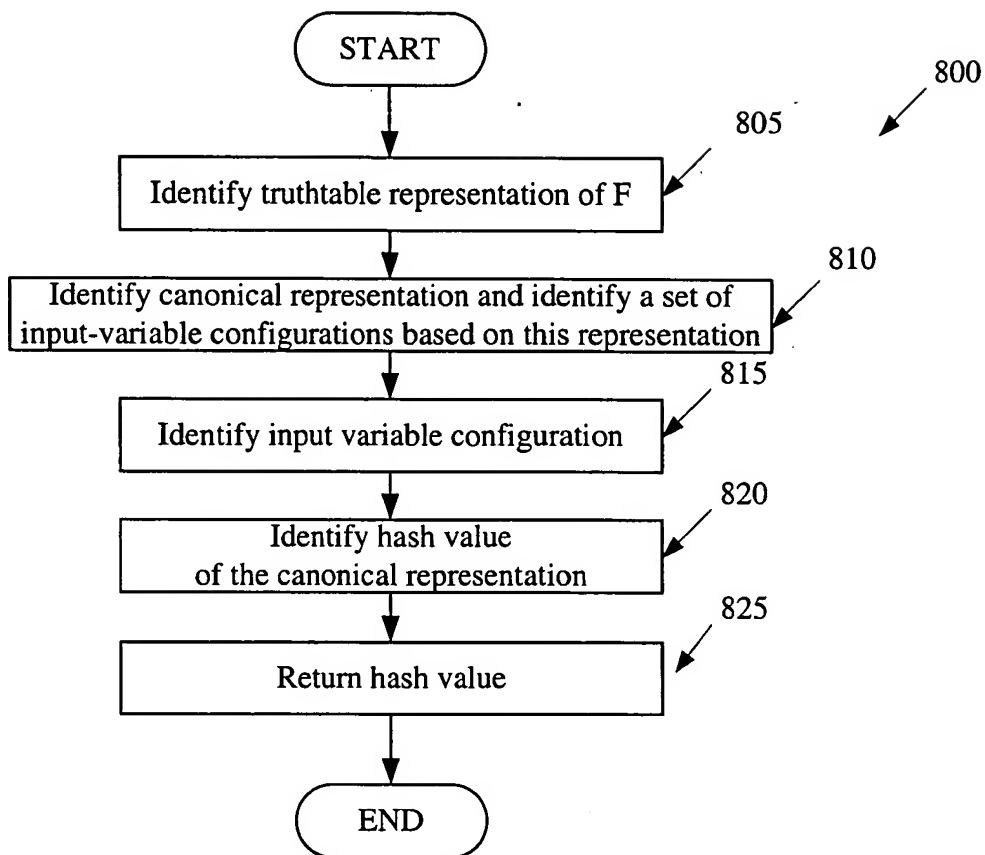


Figure 8

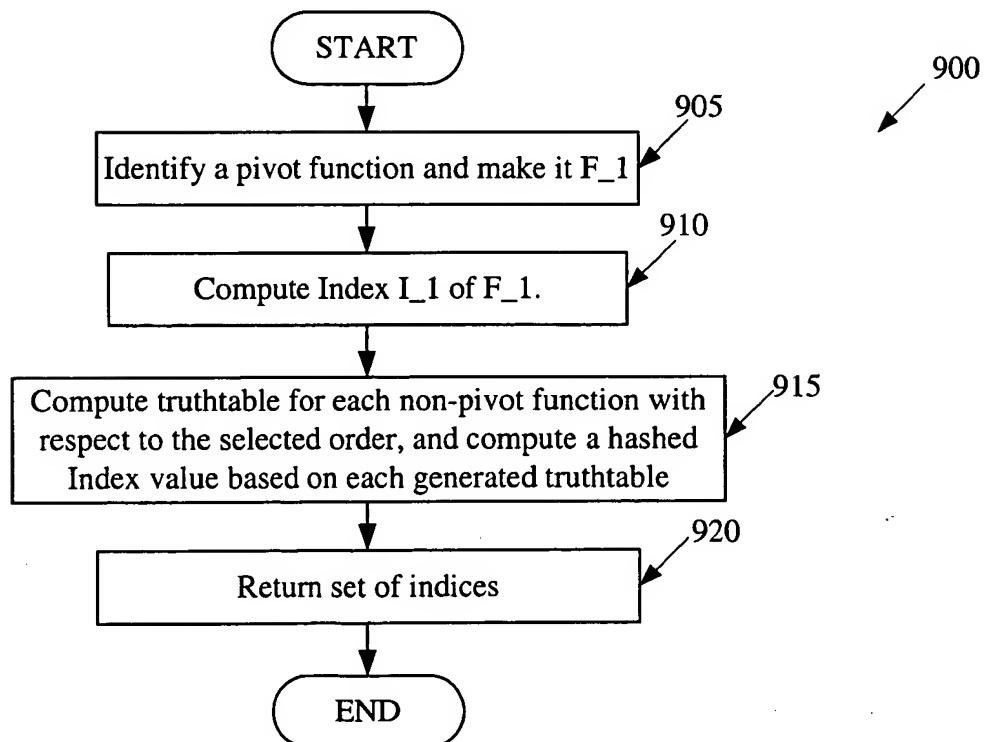


Figure 9

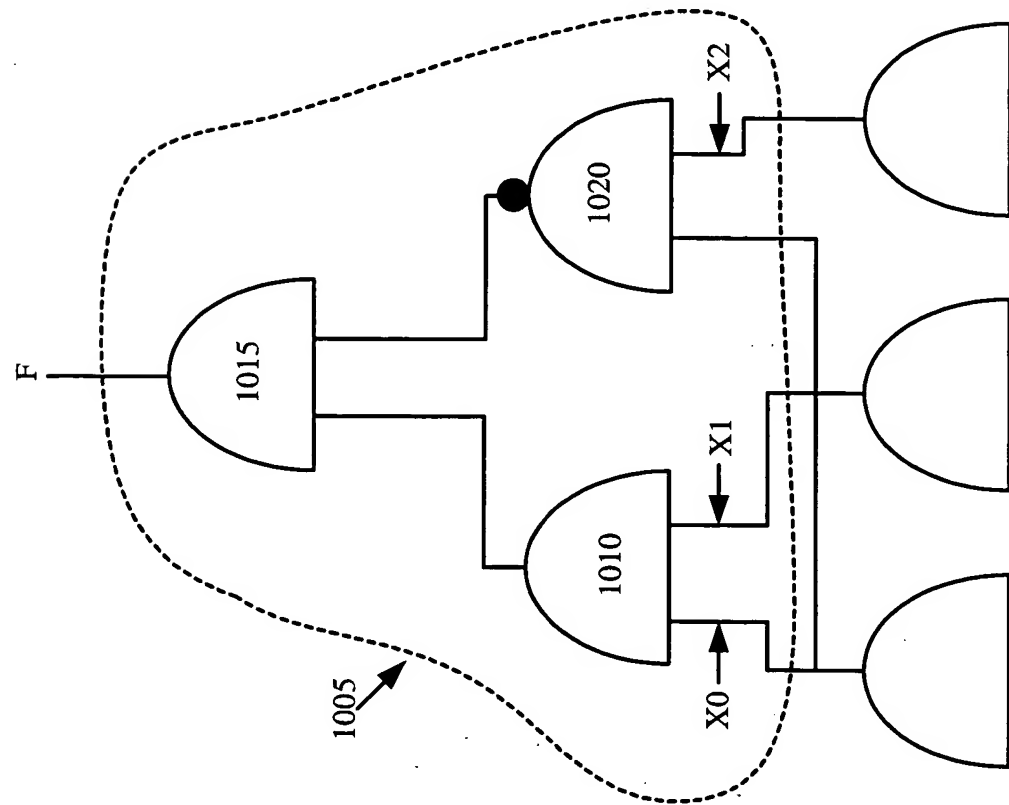


Figure 10

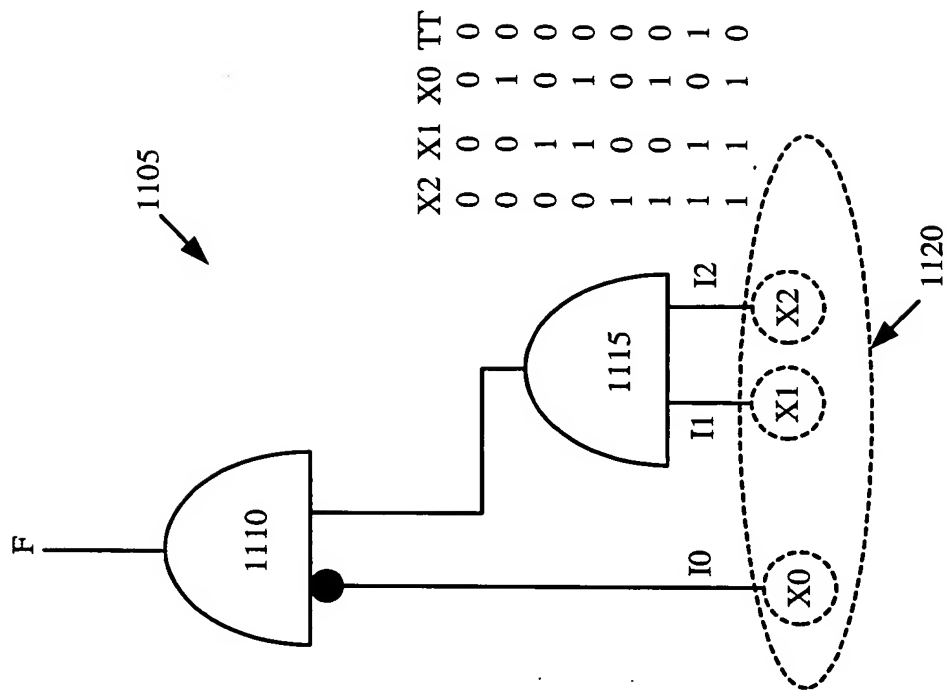
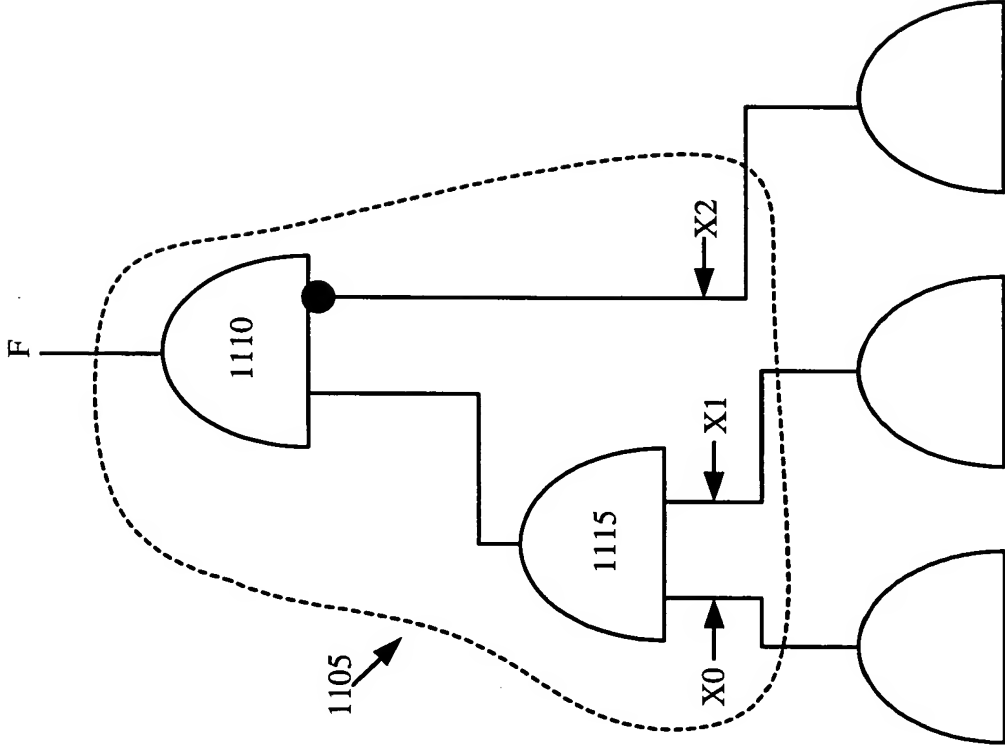
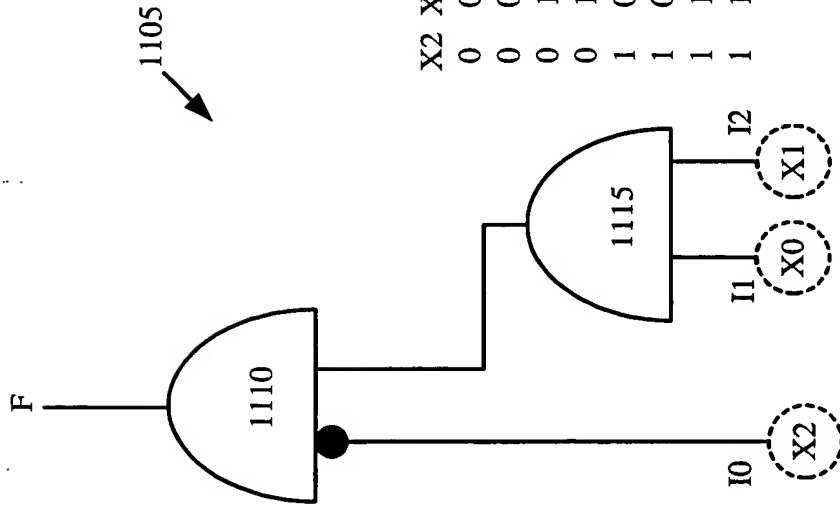


Figure 11



X2	X1	X0	TT
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

Figure 12



X2	X1	X0	TT
0	0	0	0
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	1

Figure 13

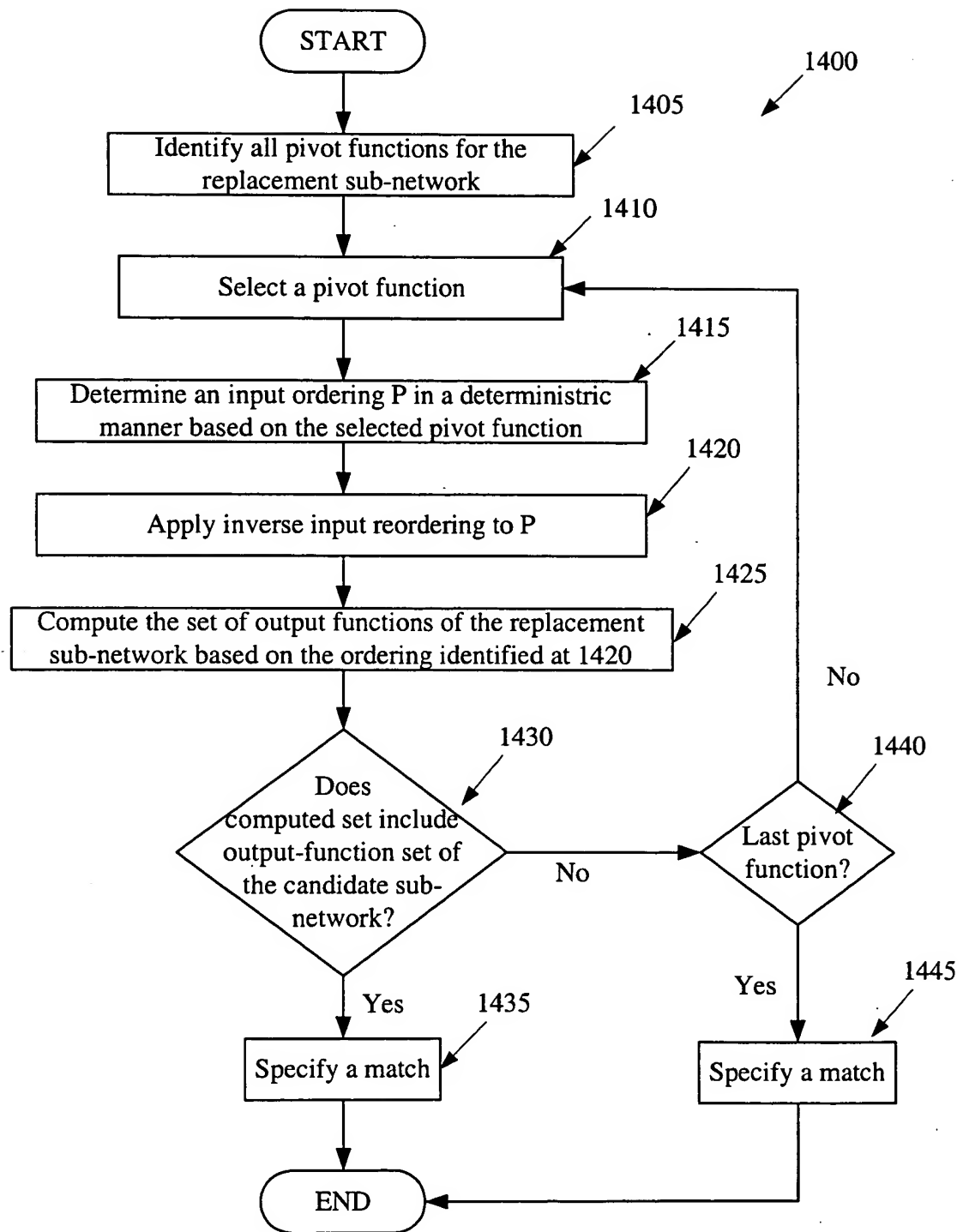


Figure 14

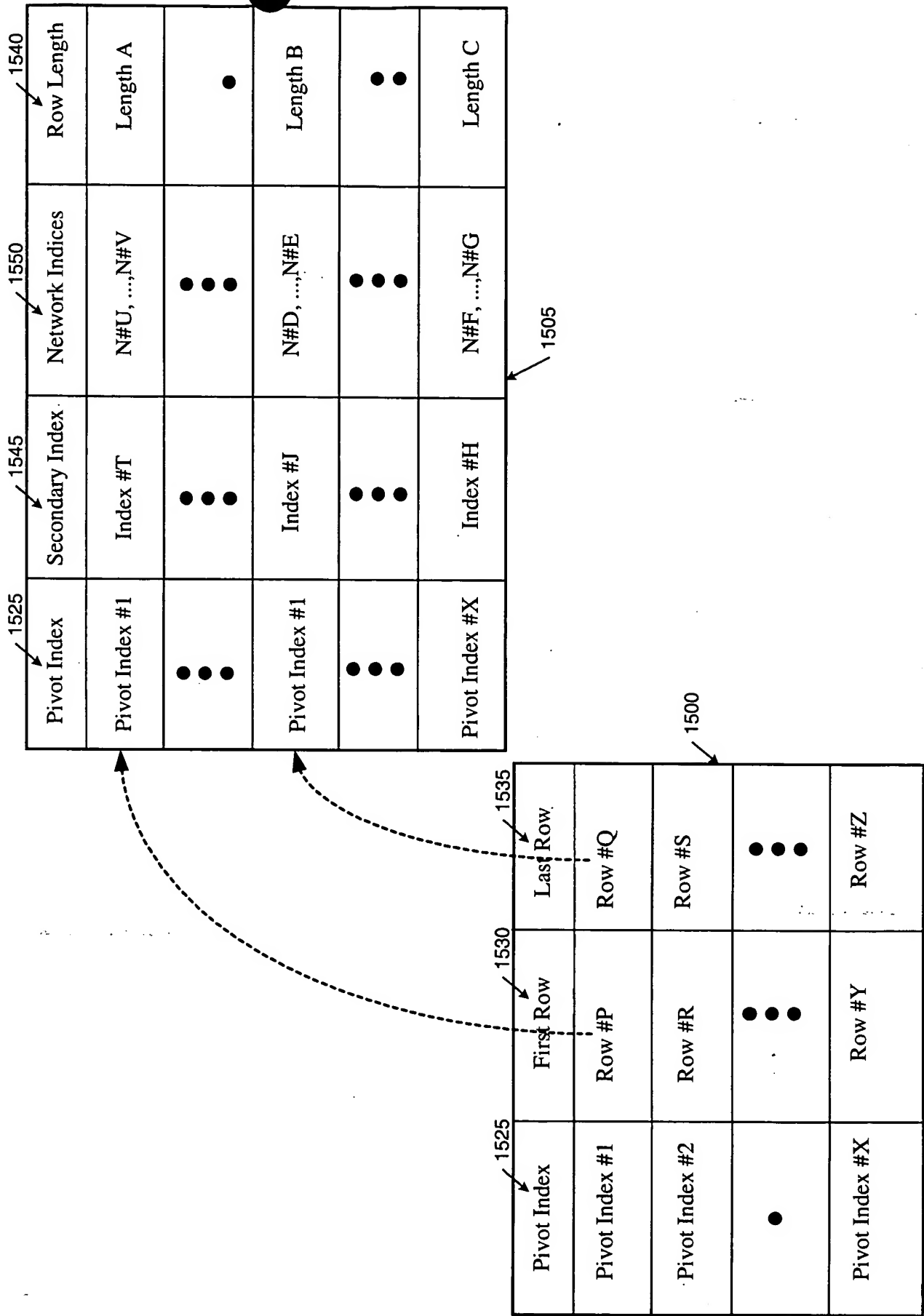


Figure 15

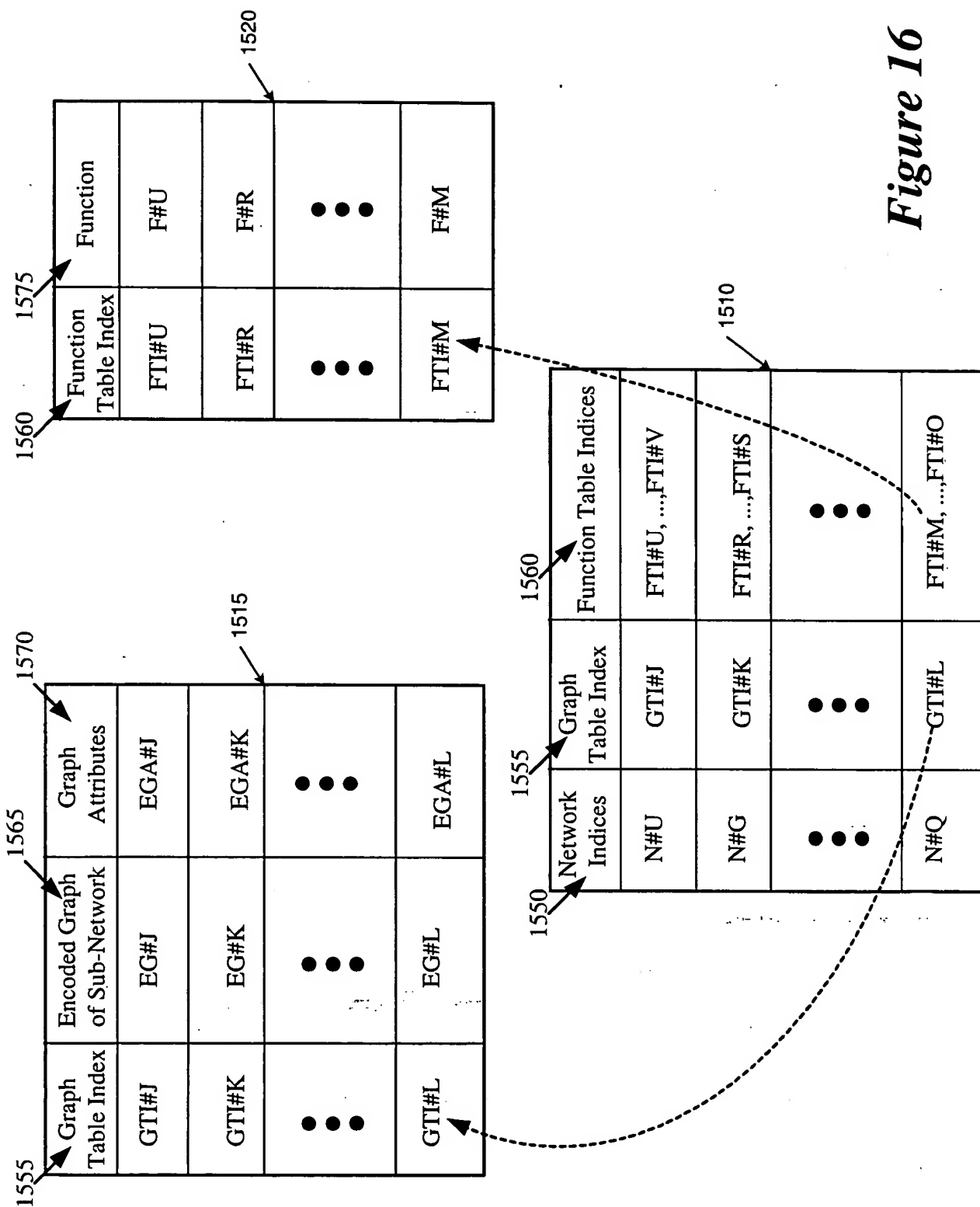


Figure 16

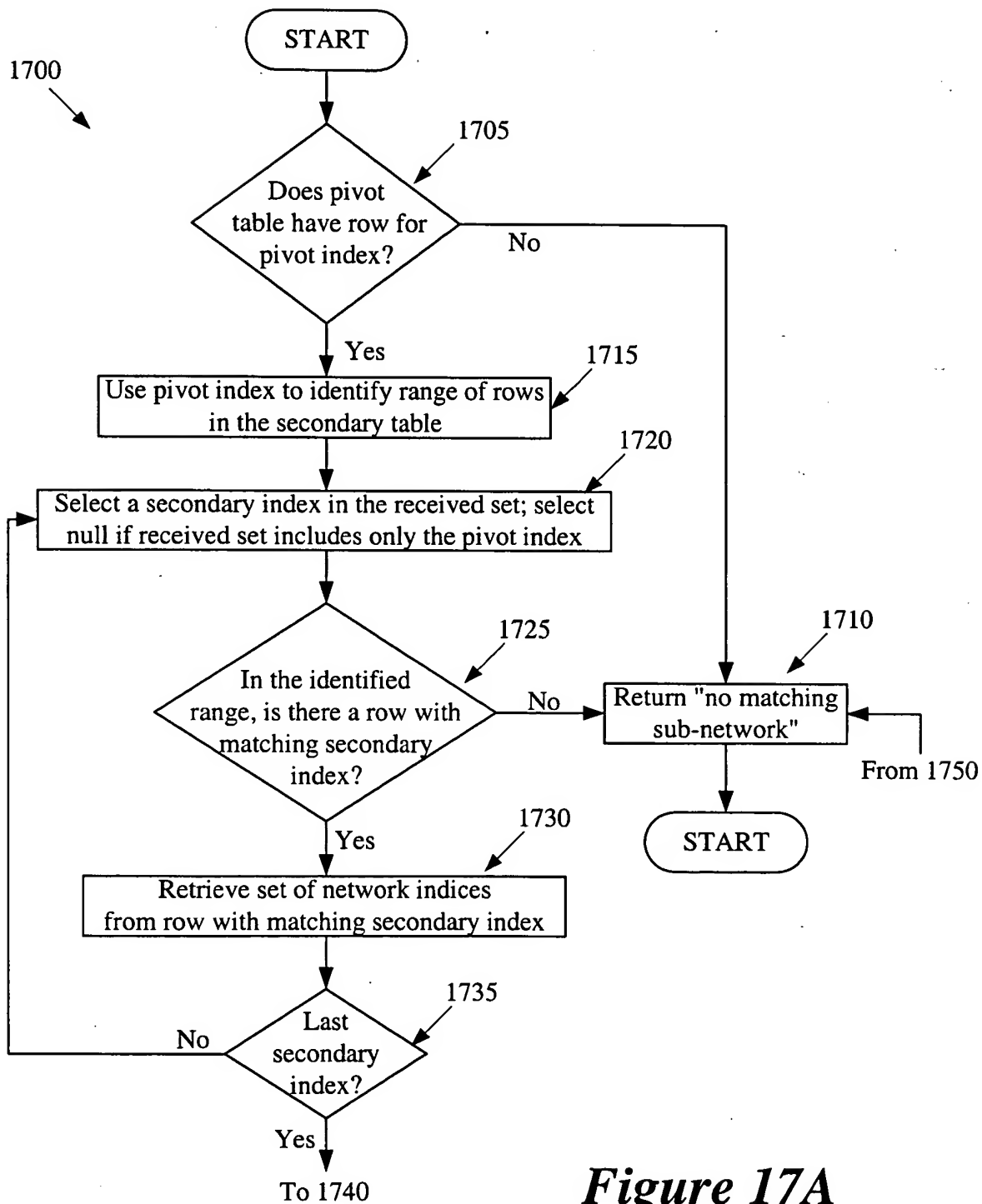


Figure 17: $\frac{\text{Figure 17A}}{\text{Figure 17B}}$

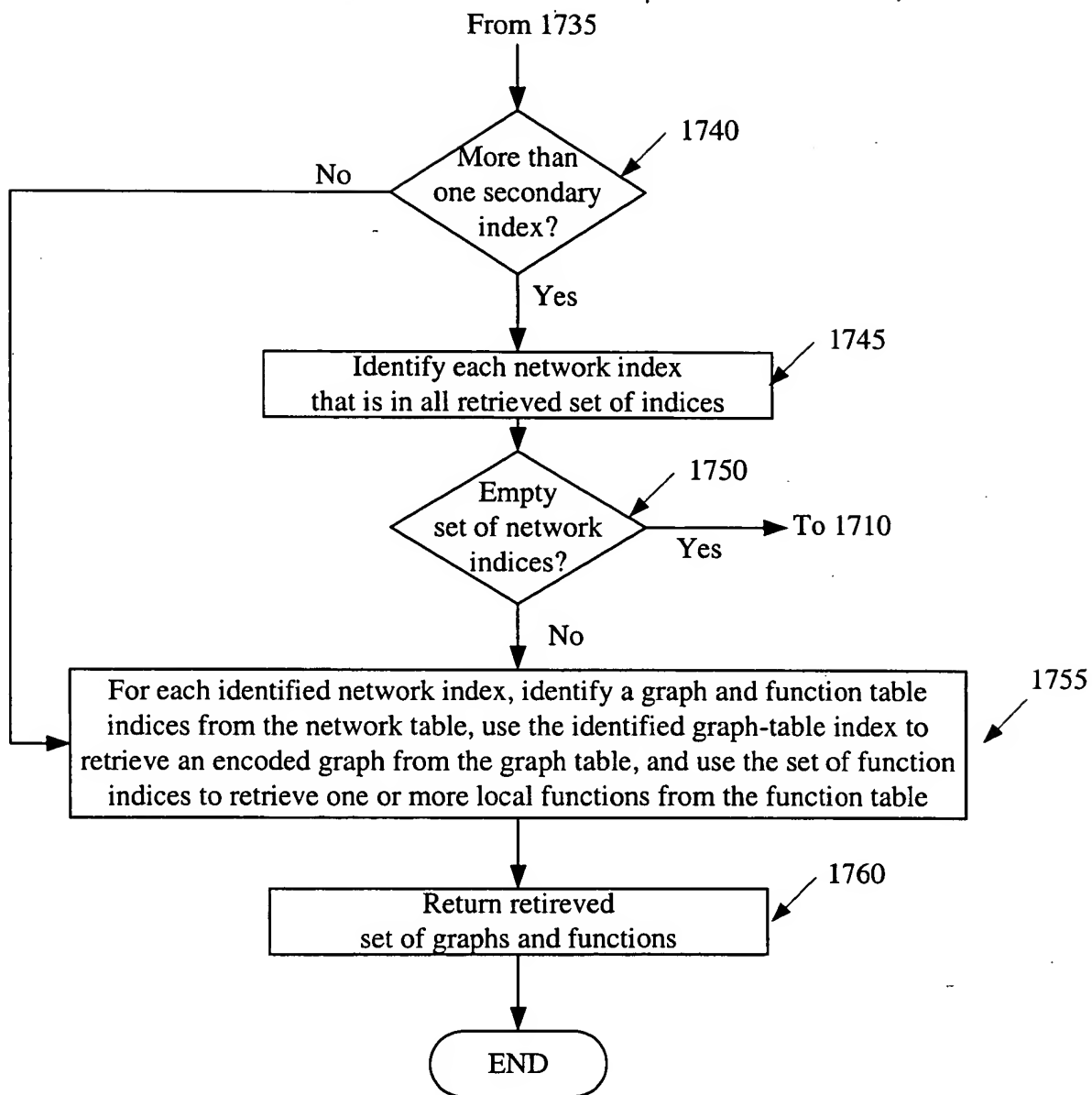


Figure 17B

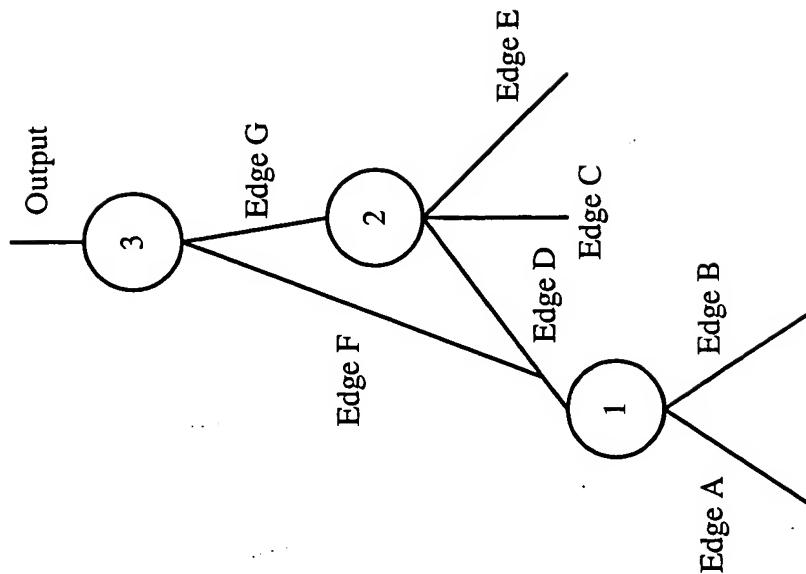


Figure 18

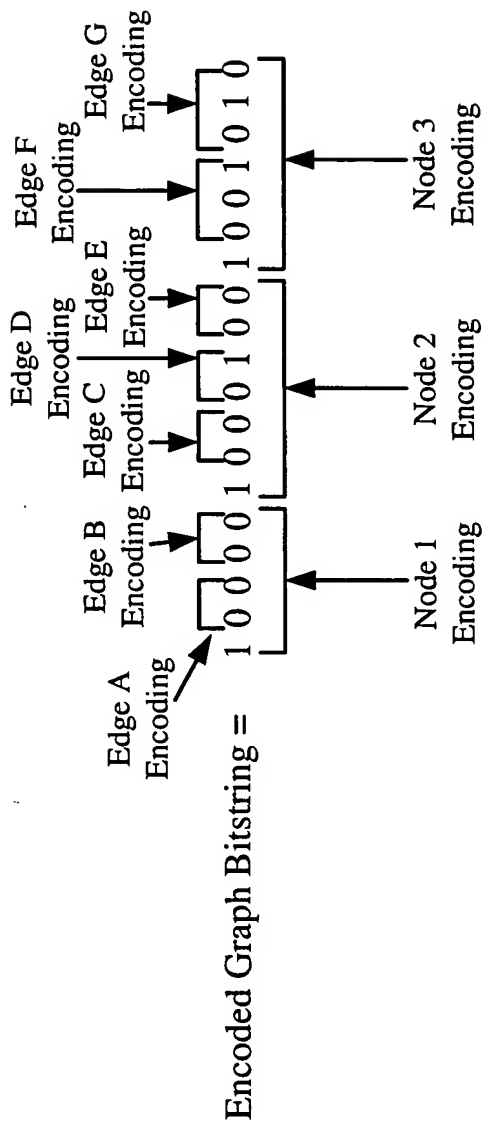


Figure 19

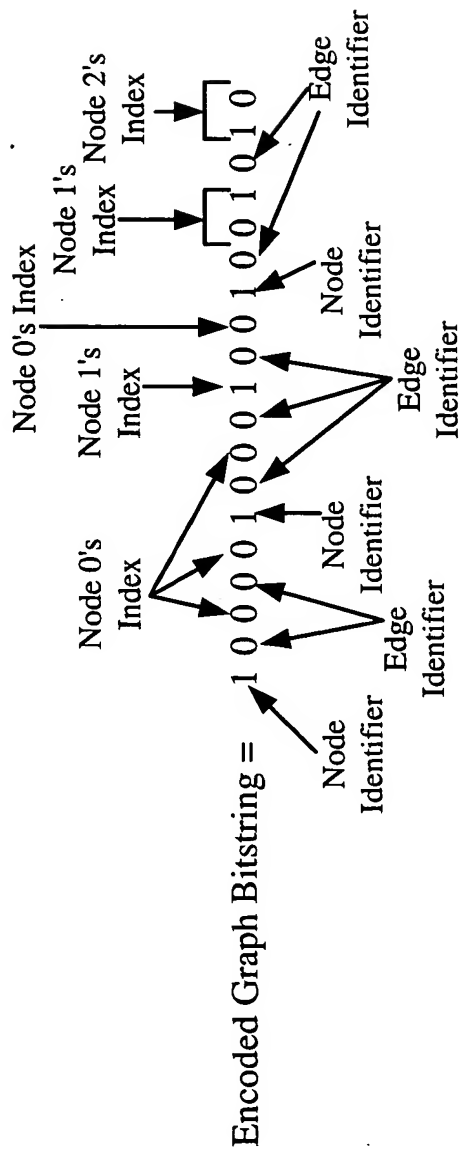


Figure 20

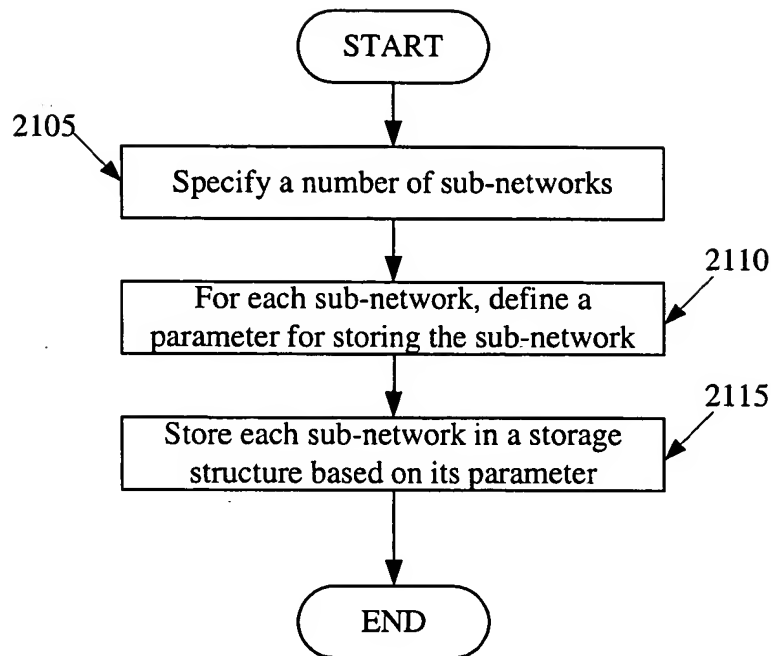


Figure 21

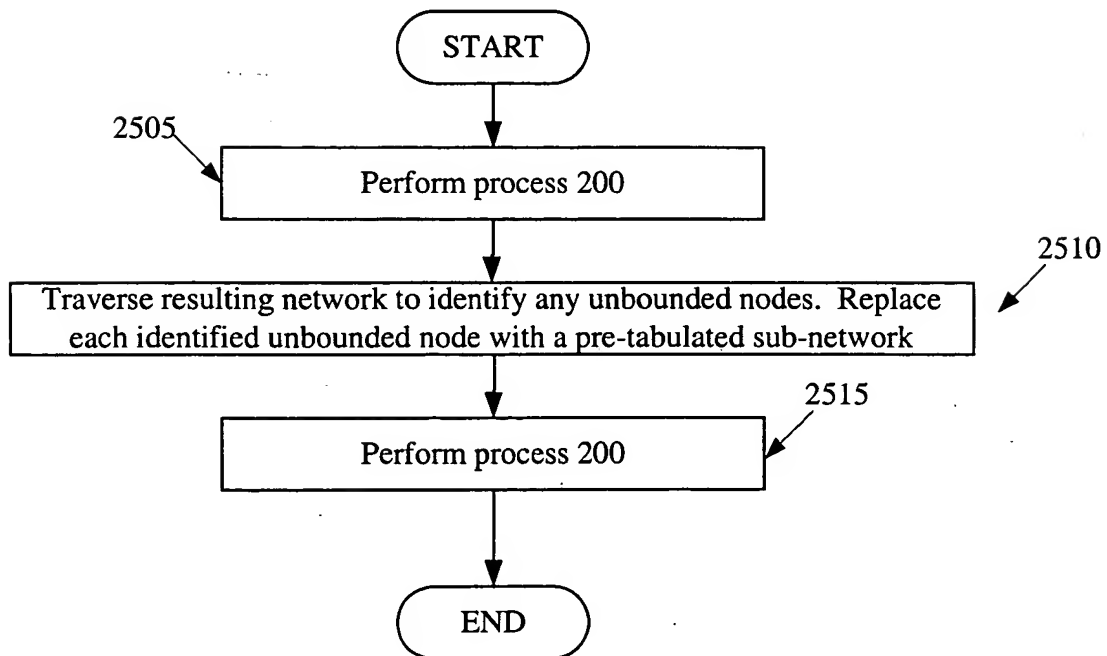


Figure 25

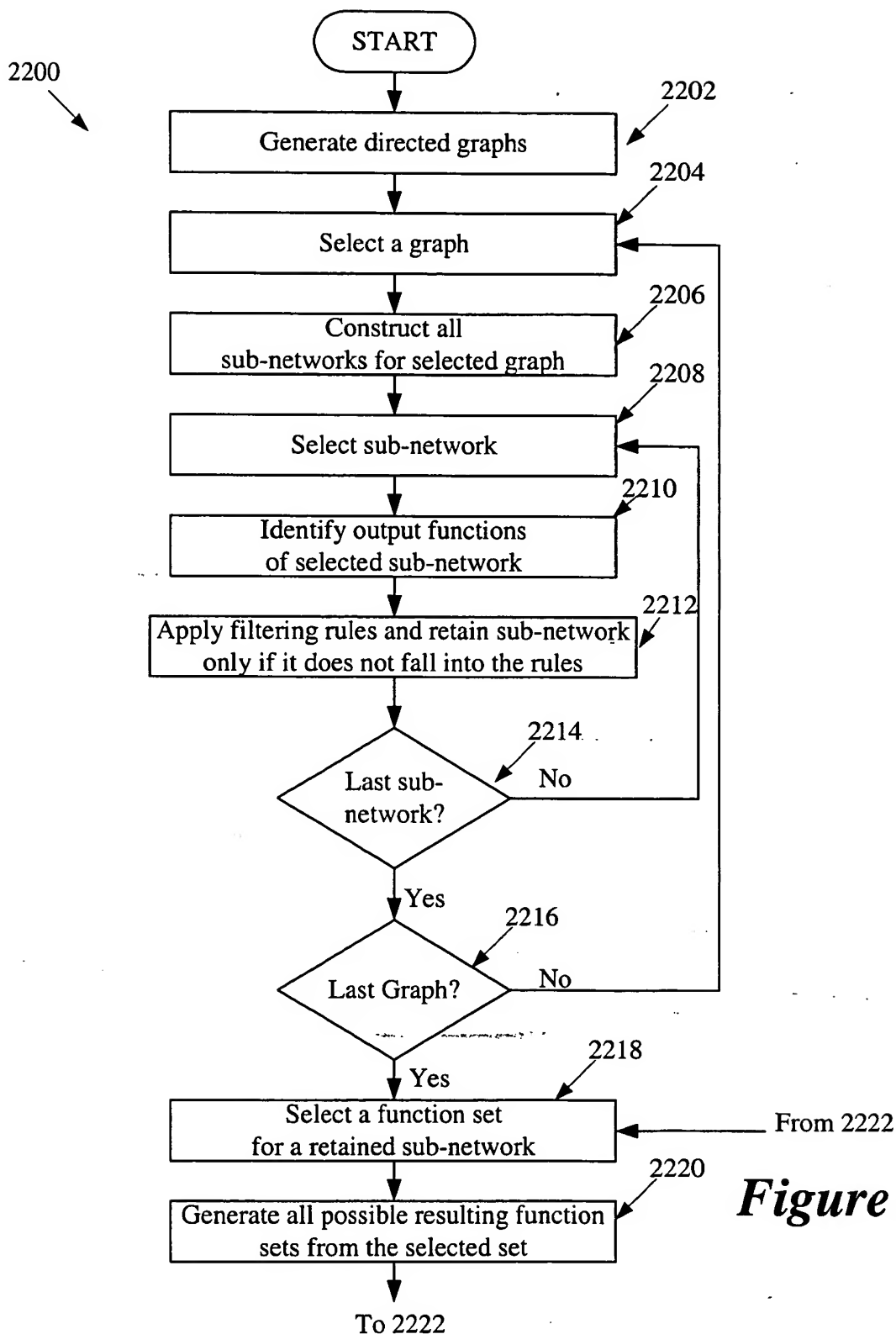


Figure 22: Figure 22A
Figure 22B
Figure 22C

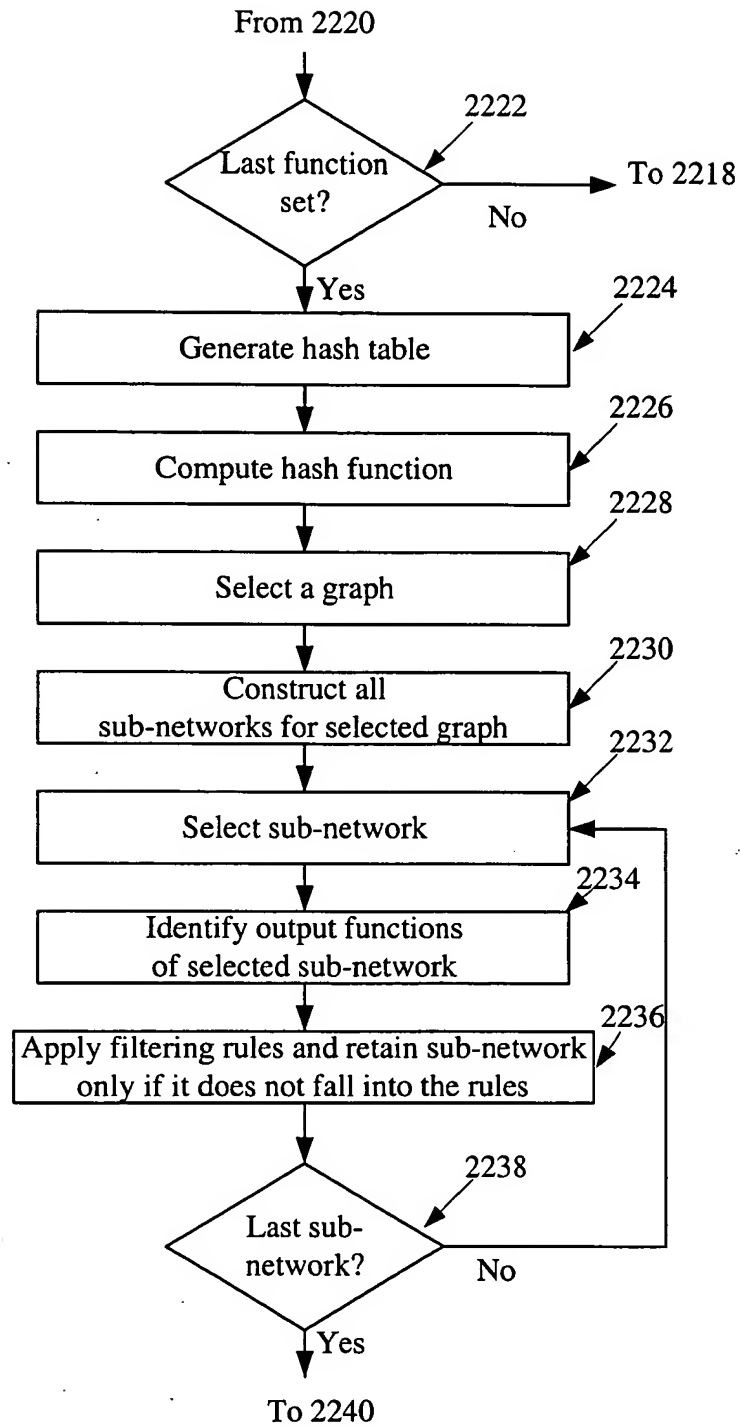


Figure 22B

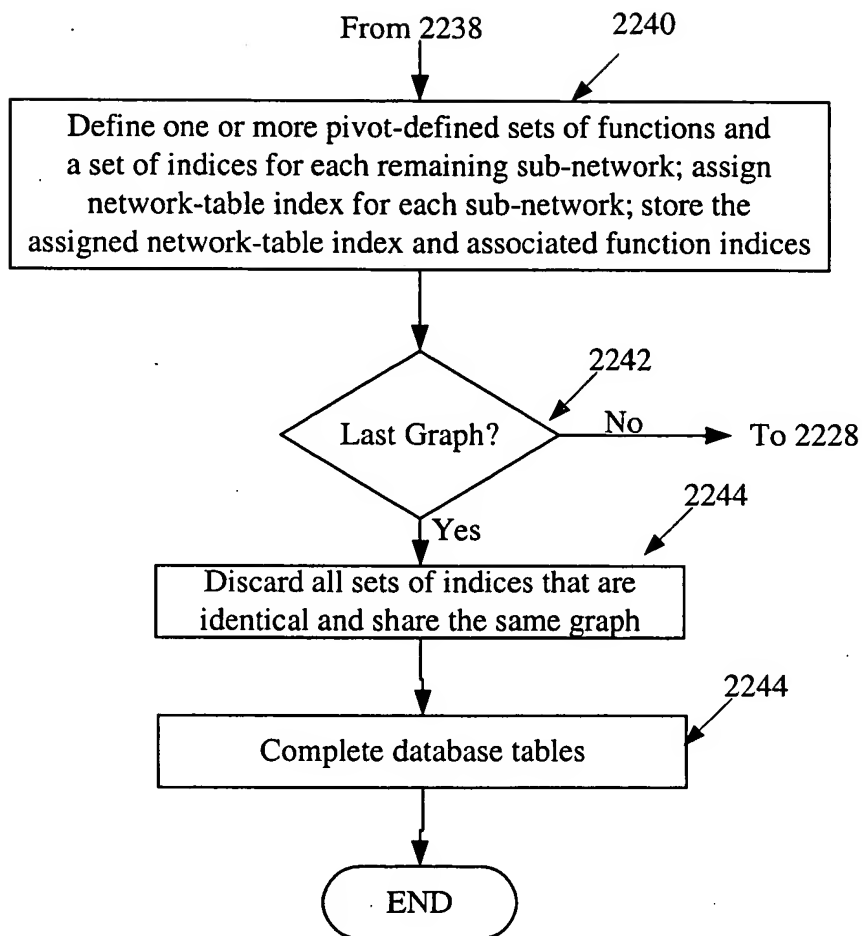


Figure 22C

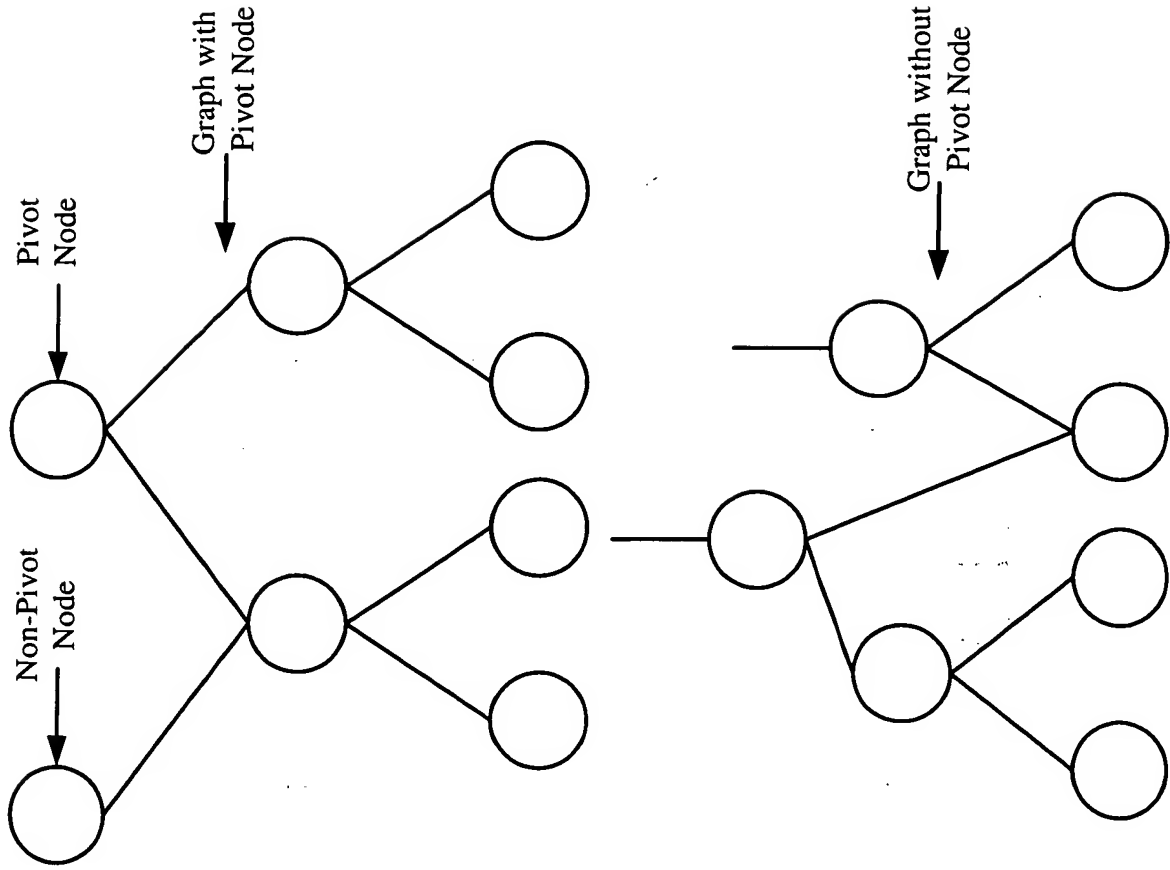


Figure 23

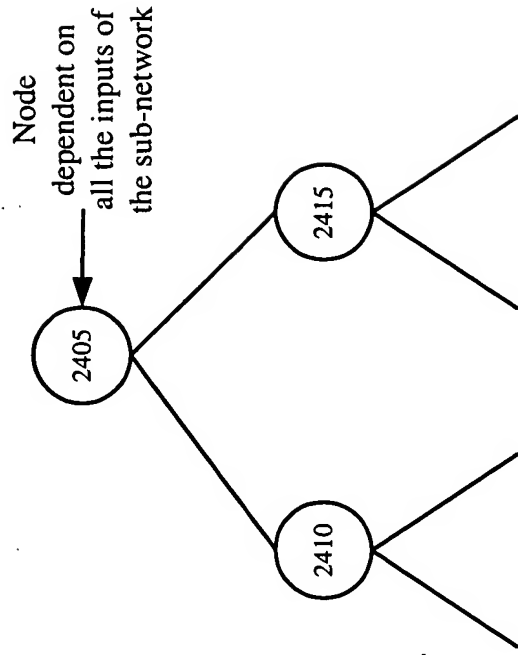


Figure 24

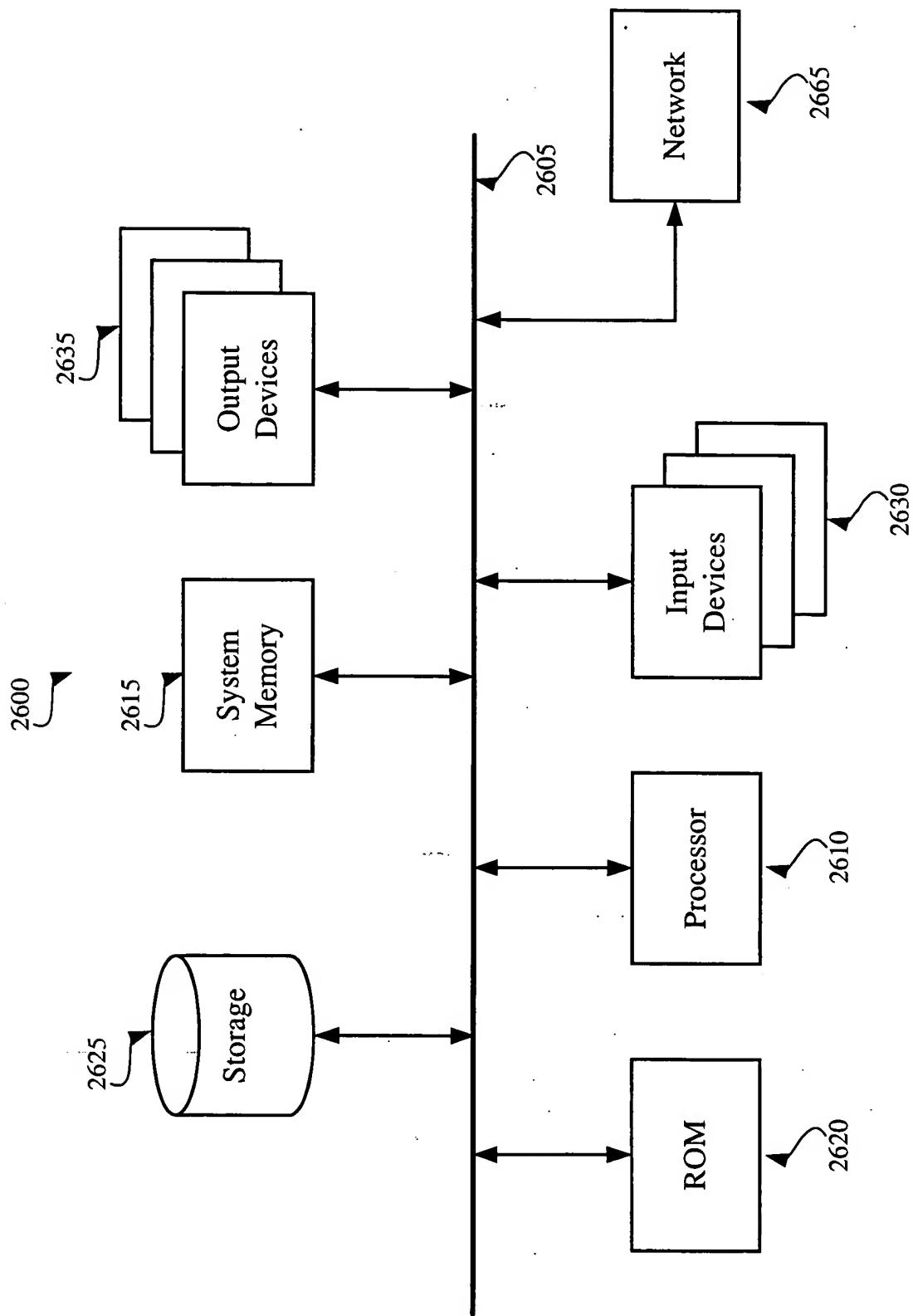


Figure 26